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ABSTRACT

A study was conducted to develop and test a method for describing, in a systematic and quantifiable fashion, the nature of the interaction that takes place between a supervisor (e.g., principal or helping teacher) and a teacher. Tape recordings of 50 supervisor-teacher conferences were collected. They were analyzed by use of a 15-category interaction system developed by Blumberg using behavioral categories developed by Flanders and Bales. The 50 recordings were tallied and transferred to individual matrixes and a composite matrix producing data which was analyzed by several methods, e.g., percentage comparisons of various combinations of column totals and area analyses to identify extended use of particular kinds of behavior. The resultant data gave rise to a number of questions about the nature of supervisor-teacher interaction, problemsolving styles of supervisors, the productivity of supervision, and the assumptions that underly it. It was concluded that the methodology carries with it the seeds of a training for supervisor behavior change. (Included are description of the 15 Categories for Analyzing Supervisor Teacher Interaction, explanation of the methods of data analysis, and the general findings of this 50-conference analysis.) (JS)

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Supervisor-Teacher Interaction: An Analysis of Verbal Behavior[1]

by

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For a number of years a great deal of energy in educational research has been expended in the direction of trying to understand the interactional nature of what transpires between teacher and students in the classroom. The work of such people as Flanders, Amidon, Hughes, Bellack, (Simon and Bower, 1967) and their students gives testimony to the widespread interest that has developed in the area of investigation. Though the interactional nature of the classroom is certainly the focal point of the teaching-learning process, there are other loci of interaction in the educational complex that relate to that which transpires in the classroom. Some examples of such interaction circumstances are faculty meetings, in-service programs, curriculum committees, and supervisory conferences. The focus of

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this study is on the latter. That is, the concern was to develop and test out a method for describing, in a systematic and quantifiable fashion, the nature of the interaction that takes place between a supervisor (by whatever role description--principal, supervisor, helping teacher and so forth) and a teacher.

Since the superordinate goal of supervision is the improvement of instruction, there are a number of assumptions upon which this study and its methodology are based. These are:

1. When a supervisor and teacher interact they are both participants in a temporary social system the aim of which is to improve the teacher's teaching ability.
2. Supervisor-teacher interaction involves the giving of help by the supervisor and receiving and utilizing of this help by the teacher.
3. The supervisory process works best when it is conceived of by both parties as a collaborative, problem-solving situation.
4. A collaborative situation develops best when there is a high degree of communicative freedom existing among the parties involved.

Implicit in these assumptions is a model of supervision that is at variance with traditional concepts of authority-

subordinate relationships. These concepts, deriving primarily from scientific management, from which it appears the field of education has borrowed, propose the notion that the superior (supervisor) by virtue of certain (but vaguely defined) innate qualities and training knows best how the job should be done. All that the worker (teacher) has to do is follow the suggestions and directions of the supervisor and better teaching will result. This point of view would be compatible, more or less, with Theory X (McGregor, 1960). The concept upon which we base our assumptions would be more closely aligned to McGregor's Theory Y which partly suggests that more effective work will result as the people involved in the work situation, including those in different hierarchical levels, conceive of themselves as collaborators in a common problem-solving effort.

The collaborative concept of supervision takes on added importance when consideration is given to the nature of the work technology that characterizes teaching. The technology of teaching may be typed as "single unit" or "small batch"(Woodword, 1958). This is the type of work in which a person or small group of people have the global responsibility for planning, operating, and evaluating what is done. Certainly this describes most teaching. A critical implication of this idea for educational supervision is this: the supervisor is confronted with the problem of inducing influence into a work situation where he has a minimal amount of

power to control the manner in which his influence attempts are implemented. For example, he cannot be in the classroom all the time to see to it that the teacher is doing what has been suggested or directed. This would indicate, then, that in order for a supervisor to be effective he would have to work with a teacher in a manner so that the teacher sees him as a source of help and is willing to test out the results of their work together in the classroom. Obviously, we are dealing with a very complex set of relationships which, in our judgement, have been grossly oversimplified in the field of education.

Procedures

In general terms, the procedures utilized in this study were to collect and analyze tape recordings of actual supervisor-teacher conferences and record and analyze them in a systematic way. More specifically:

1. Fifty tape recordings of supervisor-teacher conferences were collected. They came from graduate students who were either teachers or supervisors. As can be imagined, this is not the kind of data that is easily collected. Supervisors seem to be somewhat reluctant to have their conferences recorded and, in some cases, there is a corresponding reluctance on the part of teachers to ask. Because of this the sample is not random.

2. The tape recordings of the fifty supervisory conferences were analyzed by use of an interaction system developed by Blumberg (1969). Substantively, the system utilizes behavioral categories developed by both Flanders (Simon and Bower, 1968) and Bales (1951). Operationally, it follows Flanders. There are fifteen categories in the system, ten of them devoted to the supervisor and four to the teacher. One category is reserved for silence or confusion. A numerical tally corresponding to the behavioral category in use is made every three seconds. The tallies are then transferred to a 15 X 15 matrix. Analysis is made from the matrix.

3. After all fifty tape recordings were tallied and transferred to individual matrixes, a composite matrix of the total was constructed thus forming the basis for the findings to be reported here.

A description of the category system and a model of the matrix (Figure I) follows:

Categories for Analyzing Supervisor-Teacher Interaction

Supervisor Behavior

Category 1. Support-inducing Communications Behavior. This category includes all statements on the part of the supervisor, with the exception of praise, the affect of which is to help build a "healthy" climate between him and the teacher. Behavior that releases tension is in this category as is that which conveys an acceptance of feelings. Encouragement is categorized here.

Category 2. Praise. This is behavior on the part of the supervisor that connotes primarily the value judgement of "good" in connection with a teacher's idea, plan of action, past behavior, feelings, etc.

Category 3. Accepts or uses teacher's ideas. Included here are statements that clarify, build on, or develop ideas or suggestions by a teacher.

Category 4. Asks for information. This is behavior by the supervisor that is aimed at asking for clarification or orientation about a problem or situation under consideration. It is factually oriented and is not concerned with opinions or ways of doing things.

Category 5. Giving information. This is the opposite of Category 4. It involves the supervisor giving objective information to the teacher, orienting, summarizing, etc.

Category 6. Asks for opinions. This category is meant to describe supervisor behavior the aim of which is to ask the teacher to analyze or evaluate something that has occurred, is occurring, or may occur in the classroom or in the interaction taking place.

Category 7. Asks for suggestions. In this category are statements by the supervisor that ask the teacher to think about ways of doing things or ways in which things might have been done differently. It has an action orientation, past, present, or future. Category 7 also refers to asking for ways in which the supervisor and teacher might work together.

Category 8. Gives opinions. This category is the opposite of Category 6. It has the same substantive meaning with the exception that the supervisor is "giving" not "asking".

Category 9. Gives suggestions. In a like manner as Category 8, this one has the opposite meaning as 7. The difference is in the "giving" instead of "asking".

Category 10. Criticism. This category includes all negative value judgements about the teacher, his behavior in the classroom, teaching methodology, competency, etc. It also includes any behavior on the part of the supervisor that can be interpreted as defensive, aggressive, or tension-producing.

Teacher Behavior

Category 11. Asks for information, opinions, or suggestions. This is task-oriented behavior on the part of the teacher. It is the teacher-counterpart of Categories, 4,6, and 7.

Category 12. Gives information, opinions, or suggestions. This category, similar to Category 11, is the teacher counterpart to Categories 5,8, and 9.

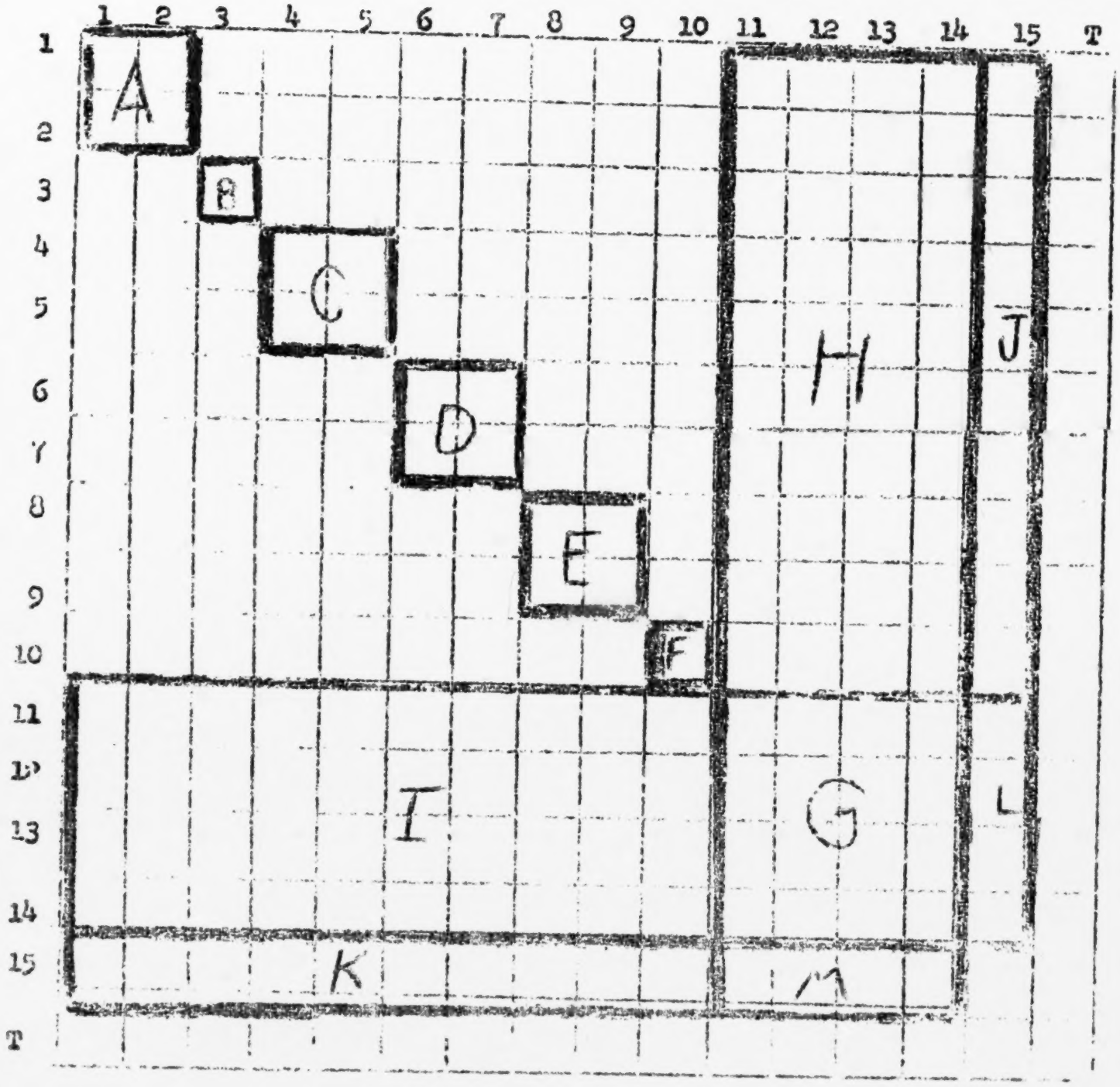
Category 13. Positive social emotional behavior. This behavior is described in the same way as that in Category 1. It is not task-oriented and helps build the supervisory relationship. Encouragement would probably not be found as constituting very much in the way of a teacher's repertoire in this category. Statements that convey agreement by choice are part of this category, but those that indicate compliance in the face of supervisor power are not.

Category 14. Negative social emotional behavior. Any behavior on the part of the teacher that tends to disrupt the supervisory relationship, produce tension or convey defensiveness on his part is part of this category. Compliance in the face of supervisory power is defined as defensiveness as is rationalization.

Catetory 15. Silence or Confusion This category is used when there is silence or both supervisor and teacher are talking at the same time so that it becomes impossible to categorize behavior specifically. An exception would be when there is silence after a behavior on the part of either supervisor or teacher that seems to have the effect of producing defensiveness (either Category 10 or 14, depending at whom the original behavior was aimed).

Figure 1

Supervisory Interview Interaction Matrix



Methods of Data Analysis

There are two general ways in which the data can be analysed. The first is to make percentage comparisons of various combinations of the column totals. For example, it is possible to do the following kinds of things:

1. Compare the total of amount of time taken up by the supervisor with that utilized by the teacher.
2. Compare the amount of time the supervisor spends asking for information with the time he spends giving information (Columns 4 and 5).
3. Compare the supervisor's total "indirect" behavior with his total "direct" behavior (columns 1,2,3,4,6,7, and 5,8,9,10).
4. Find out how much of the supervisor's time is devoted to positive social-emotional behavior and how much is concerned with negative social-emotional behavior, (columns 1,2 and 10).

The second general way in which the matrix can be analyzed is to make use of what might be called an "area analysis." An explanation of this follows:

Area A, B, C, D, E, and F are called "steady state" areas of behavior. A heavy concentration in any of these indicates that the supervisor is making extended use of a particular kind of behavior. Such concentrations might be expressed as interactive "concerns" and can be interpreted as follows:

A heavy loading in	Indicates a "concern" for
A.	Building and maintaining interpersonal relationships
B.	Utilization of the teacher's ideas
C.	Working on the informational-data level
D.	Working on the opinion data level
E.	Methodology and/or control
F.	Controlling the teacher's behavior

Area G shows the amount of extended teacher-talk that occurs in the conference. A concentration here would show that the teacher takes a good bit of the time with his questions, answers, agreements, or disagreements.

Tallies in Area H give information about how the teacher reacts to the supervisor's behavior. And, on the other side of the coin, Area I produces data concerning the manner in which the supervisor reacts to the teacher. For example, a tally in the 9-13 cell indicates that the teacher reacts to the supervisor's suggestion

in a positive way; one in the 9-14 cell suggests a negative reaction. Similarly, a tally in the 12-2 cell says that the supervisor reacts with praise to the teacher's idea, opinion, etc., while a tally in the 12-10 cell means that the supervisor reacts critically.

Area J indicates the nature of supervisor behavior which tends to produce silence or confusion and Area K shows the way the supervisor reacts to silence or confusion. In a like manner, Area L indicates what teacher behavior produces silence or confusion and Area M gives some ideas about how the teacher reacts to silence or confusion.

It will be noted that not all areas of the matrix have been labeled. These are areas that extend out, in either direction, from the steady state cells of supervisor behavior. They are not steady state behaviors nor are they interactive in the sense of showing how a teacher reacts to supervisor behavior. Rather, the patterns that develop in these areas produce data that gives some understanding of the way in which the supervisor uses himself and his total behavioral repertoire as measured by this system. Analysis of these parts of the matrix would help a supervisor see, to some extent, the flexibility of his behavior and would also give him some understanding of the relative typicality of his use of self.

In addition to these two general modes of matrix analysis, it is possible to pick out a large number of individual and, perhaps, idiosyncratic behavioral patterns from a matrix. Examples of this will develop further on in the body of this paper.

Results

Figure II is the composite matrix of the fifty cases of supervisor-teacher interaction used in this study.

For the purposes of this paper, the results to be discussed will, for the most part, be global in nature. However, some examples of more "clinically" oriented results will also be given. Because of the non-randomness of the sample, the words "supervisors" or "teachers" mean those who were part of the study.

From Figure II, then, it can be seen that:

1. The total amount of interaction time indicated on the composite matrix is 11 hours and 18 minutes. The means the average interaction time for each supervisory conference was 13.5 minutes.[1]
2. Of the total time consumed, 45 per cent was supervisor-talk, 53 percent was teacher-talk, and 2 per cent of the time was spent in silence or confusion.
3. The ratio of supervisor giving information to asking

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[1]The range was from approximately 2-39 minutes.

Figure II

Composite Supervisor-Teacher Interaction Matrix (50 Conference)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	T
1	15	8	0	5	27	2	0	0	0	0	2	33	21	3	6	122
2	2	273	1	11	70	13	0	7	3	9	1	45	35	1	4	475
3	2	13	67	22	77	10	1	10	7	3	2	436	10	26	12	698
4	0	3	0	153	36	6	0	0	1	0	6	277	4	28	13	527
5	8	94	7	113	1892	81	10	36	37	38	20	463	116	11	39	2965
6	2	2	0	6	40	162	0	3	2	1	8	149	13	12	15	425
7	0	0	0	0	5	1	16	1	0	0	1	21	1	0	0	46
8	0	3	0	2	37	9	2	151	10	6	1	32	5	2	2	262
9	1	3	0	4	35	3	0	1	194	1	0	42	10	4	4	302
10	1	2	0	7	19	2	0	1	3	225	2	19	2	24	5	312
11	3	1	5	0	32	3	1	0	0	1	20	10	1	2	3	82
12	38	54	572	163	530	103	15	43	37	10	14	4752	12	26	57	6424
13	20	14	13	4	93	8	0	4	5	0	2	49	24	1	19	256
14	4	2	32	31	10	15	1	2	2	17	2	26	0	299	15	458
15	26	3	1	6	62	9	0	3	1	1	1	60	2	20	27	222
T	122	475	698	527	2965	425	46	262	302	312	82	6424	256	459	221	13577
%	1	3	5	4	22	3	.04	2	2	2	.06	48	2	3	2	

for information $(4/5)^2$ was .18. This means that supervisors gave information slightly more than 5 times as often as they asked for it.

4. The ratio of "direct" supervisor behavior to "indirect" (1,2,3,4,6,7,/5,8,9,10) was .65. Supervisors tended to be more direct than indirect by about one third.
5. Of the time supervisors talked, they spent 10 per cent in positive social emotional behavior and 5 per cent in negative social emotional behavior.
6. The ratio of positive social emotional behavior to negative (1,2/10) is 1.9. Supervisors spend approximately twice as much time inducing positive rather than negative emotionality in their interaction with teachers.
7. In what might be conceived of as problem-solving behaviors, the ratio of telling to asking (4,6,7/5,8,9) is .28. The task-oriented behavior of supervisors, then appears to be weighted on about a 4:1 basis in favor of telling.

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[2]Parenthetical expressions in this analysis refer to a division of column totals, Thus (4/5) means the total of column 4 divided by the total of column 5.

8. The ratio of asking for opinions (intellective discussion) to the giving of opinions is 1.58. Supervisors ask opinions of the teachers about one and one half times more often than they give them.
9. In terms of arriving at action suggestions (7/9), the ratio is .15. Approximately 7 times as much time is given by the supervisor to telling the teacher what to do as is devoted to asking the teacher for his ideas about action suggestions.
10. With regard to the loadings in the steady state areas, the data on the matrix indicates the following:

Area A	50 per cent
" B	10 " "
" C	63 " "
" D	38 " "
" E	63 " "
F	72 " "

What these data mean is that of the time a supervisor spends on:

a. positive social-emotional behavior, one half is of extended nature.

b. reflecting and clarifying the teacher's ideas, 10 per cent is of an extended nature.

c. working on information-giving or asking, almost two thirds is of an extended nature.

d. asking for opinions or suggestions, about one third is of an extended nature.[1]

e. giving opinions or suggestions, almost two thirds is of an extended nature.

f. negative social-emotional behavior (mostly) criticism), almost three quarters is of an extended nature.

11. The least used supervisor behavior is that of asking the teacher for action suggestions. The matrix indicates (total, column 7) that less than one per cent of the supervisors time is devoted to this category.

12. The least used teacher behavior is that of asking the supervisor any kind of question at all. The matrix indicates (total, column 11) that this category occurs slightly more than one per cent of the time.

Illustrative of the manner in which a more detailed analysis of the matrix may be made are the following:

1. The behavior of the supervisor that receives the most negative reaction is that of asking for information (cell 4-14); the next most negative is reflecting or clarifying ideas (cell 3-14).

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[1]Note that the huge bulk in this area is asking for opinions not suggestions.

2. It appears that supervisors tend not to deal with negative feelings on the part of a teacher in a manner that helps clarify these feelings. Note cell 14-1 that indicates that the supervisor accepts or clarifies teacher negative social-emotional behavior less than 3 per cent of the time.

Some Subjective Reflections

The category system focusses only on behavior, not content. The behavior of supervisors and teachers, of course, cannot be fully understood without reference to the content around which they interact. What follows, then, are a number of impressions that one gets from listening to supervisors and teachers talk to each other.

1. Legitimate teacher complaints or grips tended not to be dealt with directly by the supervisor. More often than not the teacher's feelings were handled by agreeing with him that the complaint was indeed legitimate, period.
2. In no case, when a supervisor gave some advice or admonition to a teacher did the teacher ask "why?"
3. The huge bulk of discussion revolves around maintenance procedures: schedules, correcting papers, lining youngsters up, being in the classroom when the pupils arrive, etc.

4. When teachers became defensive, the supervisor backed off from dealing with the defensiveness.
5. The use of key words or phrases such as "discipline," "homework," "good response," "behavioral problem," or "poor home conditions" seemed to serve in place of discussion. That is, untested common assumptions about the meaning of these words enabled the participants to come to closure without exploring the basis of the assumption. Issues were closed without ever having been discussed.
6. Supervisors seem to ask pat questions; teachers respond with pat answers.
7. One rarely get the feeling of either supervisors or teachers as people. They appear to be role-playing.

Discussion

The data that have been presented, both on the systematic level from the matrix and the subjective impressions noted above, give rise to a number of questions about the nature of supervisor-teacher interaction, about problem-solving styles of supervisors, about the productivity of supervision, and about the assumptions that underly it.

First, supervisor-teacher interaction seems to be pretty much of a "telling" affair, with bulk of the supervisor's behavior being the giving of information. A fair amount of energy on the part of the supervisor is given to inducing a positive social emotional climate, albeit through the use of praise, the effectiveness of which has been brought into question. (Herzberg, 1959) Further, one might ask, "Positive social-emotional climate for what?" That is, from the analysis of the matrix and the subjective impressions noted, it appears as though the action coming from the interaction of supervisors and teachers is minimal. Only 5 per cent of the supervisor's behavior, for example, is devoted to action (cell 7 + 9).

But perhaps more important than what appears to be a low total emphasis on action is that supervisors apparently seldom ever ask teachers for ideas about action or problem-solving. The net result would seem to be that teachers are not engaged with the supervisor on matters critical to the problems they face in the classroom. Supervisor-teacher interaction does not appear to be a collaborative affair.

This latter point is reinforced when consideration is given to the behavior of the teachers. Much as the supervisor does not ask the teacher questions so the teacher rarely asks a question of

the supervisor. Why this is so is a matter for speculation and one such could be that people don't ask questions of others whom they perceive not to be a source of help. This interpretation is damning, but other studies (Blumberg and Amidon, 1965; Wiles, 1950) have indicated that the quality of supervision received by teachers, in most cases, tends to be a waste of time, at least from the point of view of the teacher. Further, when supervision is seen to be productive by teachers, it appears to be related to supervisory behavioral styles that are different than the mean as pictured by our matrix (Blumberg and Amidon, 1965). That is, the conditions in which teachers feel their supervision is valuable are those in which the supervisor behaves in a way that appears to engage the teacher in problem-solving and in which some real sense of understanding of the teacher is communicated by the supervisor.

An interesting clue concerning the supervisor's understanding of the teacher is provided by an examination of Area B on the matrix. This is the steady state cell related to Category 3, the acceptance and clarifying of the teacher's ideas. Of the total time supervisors spend in this behavior, it appears that they utilize only 10 per cent in an extended manner. This suggests that 90 per cent of the time that supervisor engage in "3's" they are giving very short responses such as "I see" or "Uh huh" and only a small part of the time do they really attempt

to clarify with something like "What you're saying is..." or "As it comes across to me, the problem is....." It may seem as though this is a very minor matter. Actually, the case is quite the opposite. The issue is related to differentiating between that kind of behavior which is a global "I understand"[1] and that which helps both parties clarify the ideas that have been expressed.

On the level of specific interaction cell analysis (non-steady state), we will look at those mentioned in the results section. It was pointed out that the behavior of the supervisor that received the most negative reaction (both absolutely and proportionately) was that of asking for information (cell 4-14). The question needs to be raised: Why is there a tendency on the part of teachers to react to information requests in a defensive manner? The most obvious inference is that even though the supervisor may intend his questions to be just that -- a search for information -- at least a fair percentage of the time they are seen by the teacher in a different light. For example, the questions may be perceived as attempts by the supervisor to "box them in" even though the supervisor intends no such thing. What is at issue here may be the total context of the supervisory confrontation.

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[1]Not infrequently such behavior takes on the connotation of a verbal tick which becomes meaningless.

Is it a situation that is oriented toward collaborative helping, negative evaluation, superior domination, or what? Certainly, our data at least raise the questions.

The second area of specific interaction that was noted was the manner in which supervisors seem to deal with negative social-emotional behavior on the part of the teacher. In terms of what might be called a "therapeutic" response to this kind of behavior, there is very little to be observed -- 3 per cent (cell 14-1). By contrast, teacher negativism is met in kind by the supervisor 13 percent of the time (cell 14-10) -- a "fighting fire with fire" attitude, one might suspect. The balance of the responses (with the exception of the somewhat mysterious praise -- cell 14-2) are rationally-oriented. This suggests the possibility that (1) the supervisor doesn't hear the negative behavior, (2) he prefers not to deal with it as such, (3) he is unskilled and uncomfortable in dealing with it, or (4) his strategy for dealing with it is to try to reason the teacher out of his feelings.

Conclusions

This study has been exploratory. Its intent was not to make definitive generalizations about the nature of what transpires when a supervisor and a teacher meet together. Nevertheless, two over-all statements seem warranted. First, the data reported do seem to raise questions about the ultimate productivity of supervisor-teacher interaction. In one sense, these interactions

could be described as the kind which neither party wants to have and from which both parties would like to disengage as soon as possible. Admittedly, this statement goes beyond the data but the feeling, corroborated by other research, persists. This is not to say that supervisors and teachers are incapable of changing their interactive patterns. What it does suggest, however, is that (1) there is a possibility that the interpersonal insights and skills possessed by many supervisors are inadequate as far as the demands of the helping relationship are concerned, (2) that the level of training provided for supervisors by school systems is likewise inadequate or lacking altogether, or (3) that the selection of personnel to be supervisors is made without regard to the behavioral demands of the job. More than likely, it is a combination of all three.

The second concluding statement is this: The methodology of this study -- that is, the systematic observing, recording, and analyzing of behavior -- carries with it the seeds of a training and feedback model that could be helpful in regard to training for supervisor behavior change. For it to be implemented will require a committment on the part of school systems that is currently not widely spread. But this, too, could change.

Finally, it is obvious that additional research under varying conditions needs to be conducted so that more precise relationships

may be investigated. Variables that could be considered might be personality, differing organization typologies, organizational role of the supervisor (inside--outside) and so forth.

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